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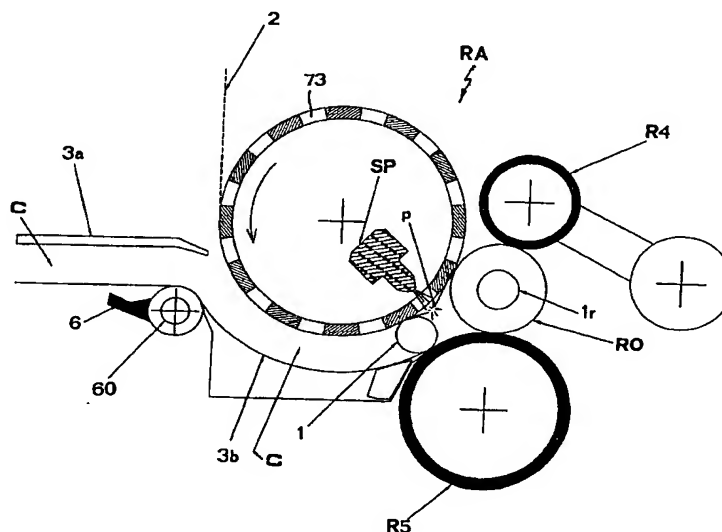
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ance Notes on Codes and Abbreviations" appearing at the begin-
ning of each regular issue of the PCT Gazette.

(54) Title: APPARATUS AND METHOD FOR CAUSING PAPER WEBS TO TEAR OFF WITHIN REWINDING MACHINES



(57) Abstract: Apparatus for causing paper webs to tear off within rewinding machines, the said web (2) being provided, at regular intervals, with transverse perforation which subdivide the web into sheets joined to each other but able to be separated in correspondence of said perforation lines, the apparatus comprising means to cause the tearing of the web (2) upon the passage of a perforation line (p) which separates the last sheet of a log (RO) in the course of formation from the first sheet of the next log to be formed, characterized in that the said tearing means are of pneumatic type (SP) able to direct a jet of compressed air toward the said line (p).

INTERNATIONAL SEARCH REPORT

International Application No

EP/IT2004/000140

A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 B65H19/26

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 B65H

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EP0-Internal

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	DE 23 30 195 A (HOBEMA MASCHF HERMANN) 2 January 1975 (1975-01-02)	1,2
A	page 6, line 9 - line 25; figures -----	3-5
X	US 2002/117575 A1 (GILMORE WILLIAM H ET AL) 29 August 2002 (2002-08-29)	1,2
A	paragraphs [0017], [0019], [0024]; figures -----	3-5
X	US 6 328 248 B1 (KAIPF WALTER) 11 December 2001 (2001-12-11)	1,2
A	column 9, line 33 - line 48; figures -----	3-5
A	US 5 901 917 A (SCHMIDT FRANCIS E ET AL) 11 May 1999 (1999-05-11) -----	1
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☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

* Special categories of cited documents :

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"O" document referring to an oral disclosure, use, exhibition or other means

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Date of the actual completion of the international search

4 November 2004

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Name and mailing address of the ISA

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International Application No

G.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Form PCT/ISA/210 (continuation of second sheet) (January 2004)

INTERNATIONAL SEARCH REPORT

International application No.
PCT/IT2004/000140

Box II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:
2. ☐ Claims Nos.:
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:
3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this International application, as follows:

see additional sheet

As a result of the prior review under R. 40.2(e) PCT,
null additional fees are to be refunded.

1. ☒ As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

- ☒ The additional search fees were accompanied by the applicant's protest.
- ☐ No protest accompanied the payment of additional search fees.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. claims: 1-5

Apparatus for causing paper webs to tear off within rewinding machines.

1.1. claims: 1+3,4

Apparatus for causing paper webs to tear off within rewinding machines, the said web being provided, at regular intervals, with tranverse perforation lines which subdivide the web into sheets joined to each other but able to be separated in correspondence of said perforation lines, the apparatus comprising means to cause the tearing of the web upon the passage of a perforation line which separates the last sheet of a log in the corse of formation from the first sheet of the next log to be formed, wherein said tearing means are of pneumatic type able to direct a jet of compressed air toward said line, wherein said pneumatic means comprise a set of nozzles associated, via corresponding solenoid valves, with a reservoir of compressed air: the said nozzles, with the respective solenoid valves and the reservoir being positioned internally to a web-feeding roller whose outer surface is delimited by a tubular jacket provided with a pluality of openings through which the nozzles are allow to act, characterized in that sai tubular jacket provided with a plurality of openings rotates about its longitudinal axis while said reservoir is staionary.

1.2. claim: 1+5

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

Apparatus for causing paper webs to tear off within rewinding machines, the said web being provided, at regular intervals, with transverse perforation lines which subdivide the web into sheets joined to each other but able to be separated in correspondence of said perforation lines, the apparatus comprising means to cause the tearing of the web upon the passage of a perforation line which separates the last sheet of a log in the course of formation from the first sheet of the next log to be formed, wherein said tearing means are of pneumatic type able to direct a jet of compressed air toward said line, wherein said pneumatic means comprise a set of nozzles associated, via corresponding solenoid valves, with a reservoir of compressed air: the said nozzles, with the respective solenoid valves and the reservoir being positioned internally to a web-feeding roller whose outer surface is delimited by a tubular jacket provided with a plurality of openings through which the nozzles are allowed to act, characterized in that the said pneumatic means comprise a set of nozzles associated, by means of corresponding solenoid valves, with a reservoir of compressed air: the said nozzles, with the respective solenoid valves and reservoir being positioned externally to a web-feeding roller whose outer surface is provided with a plurality of circumferential grooves in correspondence of which the nozzles are positioned.

2. claims: 6-8

Method for causing paper webs to tear off within rewinding machines, comprising a step for feeding a continuous paper web to a station in which the formation of a log takes place, the said web being provided with transverse pre-cutting or perforation lines at regular intervals, wherein it includes interrupting the continuity of the web at a predetermined instant by the impact by the impact of a jet of fluid onto the web, the jet being directed toward a perforation line of the web which separates the last sheet of a log in the course of formation from the first sheet of the next log to be formed, characterized in that the said step for delivering a fluid jet is operated subsequently to a step for stretching of the web in the region interested by said jet.

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/IT2004/000140

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